and notes. The provisions of subpart B of this part (Time Deposit securities) apply except as specified in Subpart D of this part. Special Zero Interest securities were discontinued on October 28, 1996. The only zero interest securities available after October 28, 1996, are zero interest Time Deposit securities that are subject to subpart B of this part.

§ 344.11 How do I redeem a Special Zero Interest Security before maturity?

Follow the provisions of §344.6(a) through (g), except that no market charge or penalty will apply when you redeem a special zero interest security before maturity.

APPENDIX A TO PART 344—EARLY REDEMPTION MARKET CHARGE FORMULAS AND EXAMPLES FOR SUBSCRIPTIONS FROM DECEMBER 28, 1976, THROUGH OCTOBER 27, 1996

(a) The amount of the market charge for bonds and notes subscribed for before October 28, 1996 can be determined by the following formula:

$$M = \frac{\left(\frac{b}{2}\right) x \left(\frac{r}{s}\right) + \left(\frac{b}{2}\right) a_{n\urcorner}}{1 + \left(\frac{r}{s}\right) x \left(\frac{i}{2}\right)}$$

(Equation 1)

WHERE:	
M =	Market charge
b =	Increased annual borrowing cost (i.e., principal multiplied by the excess of the current borrowing rate for the period from redemption to original maturity of note or bond over the rate for the security)
r =	Number of days from redemption date to next interest payment date
s =	Number of days in current semi-annual period
i =	Treasury borrowing rate over the remaining term to maturity, based on semi-annual interest payments and expressed in decimals
n =	Number of remaining full semi-annual periods from the redemption date to the original maturity date, except that if the redemption date is on an interest payment date, n will be one less than the number of full semi-annual periods remaining to maturity
v^n =	$1/(1 + i/2)^n$ = present value of 1 due at the end of n periods (Equation 2)
$a_{n\urcorner}$ =	$(1 - v^n)/(i/2) = v + v^2 + v^3 + \ldots + v^n$ = present value of 1 per period for n periods (Equation 3)

(b) The application of this formula can be illustrated by the following example:

(1) Assume that a $600,000 note is issued on July 1, 1985, to mature on July 1, 1995. Interest is payable at a rate of 8% on January 1 and July 1.

(2) Assume that the note is redeemed on February 1, 1989, and that the current borrowing rate for Treasury at that time for the remaining period of 6 years and 150 days is 11%.

(3) The increased annual borrowing cost is $18,000. ($600,000)x(11%-8%)

(4) The market charge is computed as follows:

$$M = \frac{(\$18,000/2)\ x\ (150/181) + (\$18,000/2)a_{n\rceil}}{1 + (150/181)(.11/2)}$$

(Equation 4)

$$M = \frac{(\$7,458.56) + (\$9,000)a_{n\rceil}}{1.045580111}$$

(Equation 5)

$$M = \frac{(\$7,458.56) + (\$9,000)\ x\ \left\lfloor \frac{1 - \frac{1}{(1+.11/2)^{12}}}{(.11/2)} \right\rfloor}{1.045580111}$$

(Equation 6)

$$M = \frac{(\$7,458.56) + (\$9,000)(8.618517849)}{1.045580111}$$

(Equation 7)

$$M = \frac{(\$7,458.56) + (\$77,566.66)}{1.045580111}$$

(Equation 8)

$$M = \$81,318.71$$

(Equation 9)

(c) The amount of the market charge for certificates of indebtedness subscribed for before October 28, 1996 can be determined by the following formula:

$$M = \frac{(b)\left(\frac{r}{s}\right)}{1 + \frac{r}{s}(i)}$$

(Equation 10)

WHERE:	
M =	Market charge
b =	Increased borrowing cost for full period
r =	Number of days from redemption date to original maturity date
s =	Number of days in current annual period (365 or 366)
i =	Current borrowing rate expressed in decimals (discount factor)

(d) The application of this formula can be illustrated by the following example:

(1) Assume that a $50,000 certificate of indebtedness is issued on March 1, 1987, to mature on November 1, 1987. Interest is payable at a rate of 10%.

(2) Assume that the certificate of indebtedness is redeemed on July 1, 1987, and that the current borrowing cost to Treasury for the 123-day period from July 1, 1987, to November 1, 1987, is 11.8%.

(3) The increased annual borrowing cost is $900. ($50,000)×(11.8% − 10%)

(4) The market charge is computed as follows:

$$M = \frac{\$900\left(\frac{123}{365}\right)}{1 + \left(\frac{123}{365}\right)(.118)} =$$

(Equation 11)

$$\frac{\$303.29}{1.039764384} =$$

(Equation 12)

$$\$291.69$$

(Equation 13)